

REMARKS

Claims 1-7, 16 and 23-28 are now pending. No claims have been amended. Applicant requests reconsideration and reexamination of the pending claims.

Claims 1-7, 16 and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carson in view of Gadgil (USPN 5,284,519). Applicant overcomes the rejections as follows.

In regard to Claim 1, Applicant wishes to reiterate that the disclosure in Carson does not teach or suggest the features set forth in Claim 1 alone or combination with Gadgil. It is an error to find obviousness where the references diverge from and teach away from the invention at hand. See W.L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1550 (Fed. Cir. 1983). A reference teaches away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the patent application. See In re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994). The Carson reference teaches away from the present invention since the Carson disclosure is not helpful in reaching the results achieved by the present invention, which is to vent exhausted gases free of non-purified hydrogen and purifying the non-purified hydrogen gas to generate a purified H₂ gas, which can then be introduced into the reactor along with additional vapor-phase chemicals, thus recycling the H₂.

Specifically, Carson discloses that hydrogen is vented from the system and used as fuel. (Carson, col. 4, lines 42-43) The disclosure regarding recycling of H₂ includes controlling the venting so as to maintain a particular concentration of hydrogen in the system. (Col. 4, line 68, col. lines 1-2) However, there is no disclosure in Carson regarding venting only gases which are free of H₂.

Furthermore, the Examiner has failed to identify any teaching or suggestion to combine the Carson reference with the Cadgil reference. The Carson patent is directed to "conservation of hydrogen in... processes used in oil refineries and petrochemical plants," whereas the Cadgil reference is directed to a diffuser stagnation point flow reactor for vapor deposition of thin films. Obviousness cannot be established by combining the teachings of prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. See ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577 (Fed. Cir. 1984).

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Here, there is no teaching or suggestion to combine a hydrogen conservation system used in petrochemical plants disclosed in Carson with the thin film deposition system disclosed in Cadgil. Instead, Cadgil teaches away from using a hydrogen conservation system in conjunction with the reactor disclosed therein in disclosing that gaseous reactive products leave the reactor and “are subsequently scrubbed or adsorbed on a catalytic charcoal and the remnant carrier gas such as He/Ne/Ar or H₂ is vented to atmosphere.” (Cadgil, col. 7, lines 30-33, emphasis added) Cadgil does not teach or suggest that it is desirable to conserve or recycle any carrier gases, including H₂.

Accordingly, Claim 1 is allowable over the cited references alone and in combination.

For reasons similar to those given for Claim 1, Claims 2 and 24 are not rendered obvious over Carson in view of Cadgil. As stated above neither Carson nor Cadgil disclose the features set forth therein either alone or in combination. Accordingly, Claims 2 and 24 are allowable over Carson in view of Cadgil.

Claims 3-7, 16 and 23 depend from Claim 2 and are allowable for at least the same reasons as Claim 2 as well as for the novel features which they add. Claims 25-28 depend from Claim 24 and are allowable for at least the same reasons as Claim 24 as well as for the novel features which they add.

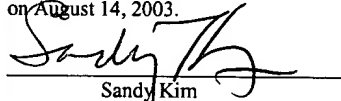
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CONCLUSION

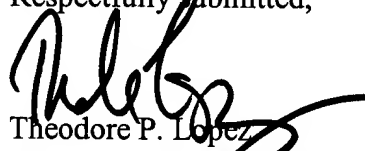
For the above reasons, pending Claims 1-7, 16 and 23-28 are now in condition for allowance and allowance of the application is hereby solicited. If the Examiner has any questions or concerns, the Examiner is hereby requested to telephone Applicant's Attorney at (949) 752-7040.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on August 14, 2003.


Sandy Kim

August 14, 2003
Date of Signature

Respectfully submitted,


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